

12 -01- 2001

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## CLAIMS

1. An arrangement in connection with a feedback control system connected to an anaesthesia machine, the arrangement comprising a controllable device (10), a measuring device (7), a controlling device (9) and a user interface by which the controlling device (9) can be monitored by means of set values, whereby the measuring device (7) is adapted to measure a measuring value (8) from a measuring point, which measuring value is dependent on the operation of the controllable device and the controlling device (9) is adapted to monitor the controllable device (10) on the basis of the measuring values and set values, **characterized** in that the arrangement comprises means (15a, 15b, 15c) adapted to feed a reference signal (16) to the measuring device (7) periodically and that the controlling device (9) is adapted to compare the measuring value (18) obtained from the measuring device (7) on the basis of the reference signal with the real and known reference value (17) of the reference signal and adapted to take a safety measure when the measuring value (18) obtained on the basis of the reference signal and the real and known reference value (17) differ substantially from each other.

2. An arrangement as claimed in claim 1, **characterized** in that a safety measure is the disconnection of the control of a controllable device.

3. An arrangement as claimed in claim 1, **characterized** in that a safety measure is the opening of a safety valve.

4. An arrangement as claimed in claim 1, **characterized** in that a safety measure is the giving of an alarm signal.

5. An arrangement as claimed in claim 1, **characterized** in that the controllable device (10) comprises a gas mixer and/or ventilator used in patient care, and that the measuring device (7) is a gas monitor and that the controlling device (9) is a separate controller.

6. An arrangement as claimed in claim 1, **characterized** in that the reference signal (16) is a gas sample.

7. An arrangement as claimed in claim 6, **characterized** in that means for feeding the reference signal (16) comprise a selector valve (15a) adapted to periodically change a breathing gas sample (8) flowing to the gas monitor for a gas sample used as a reference signal (16):

8. An arrangement as claimed in claim 6 or 7, **characterized**

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9. An arrangement as claimed in claim 7, characterized in that backup valves (15b, 15c) are adapted to supervise the operation of the selector valve (15a).

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Experiment 1	Experiment 2	Experiment 3	Experiment 4	Experiment 5	Experiment 6	Experiment 7	Experiment 8	Experiment 9	Experiment 10	Experiment 11	Experiment 12	Experiment 13	Experiment 14	Experiment 15	Experiment 16	Experiment 17	Experiment 18	Experiment 19	Experiment 20	Experiment 21	Experiment 22	Experiment 23	Experiment 24	Experiment 25	Experiment 26	Experiment 27	Experiment 28	Experiment 29	Experiment 30	Experiment 31	Experiment 32	Experiment 33	Experiment 34	Experiment 35	Experiment 36	Experiment 37	Experiment 38	Experiment 39	Experiment 40	Experiment 41	Experiment 42	Experiment 43	Experiment 44	Experiment 45	Experiment 46	Experiment 47	Experiment 48	Experiment 49	Experiment 50	Experiment 51	Experiment 52	Experiment 53	Experiment 54	Experiment 55	Experiment 56	Experiment 57	Experiment 58	Experiment 59	Experiment 60	Experiment 61	Experiment 62	Experiment 63	Experiment 64	Experiment 65	Experiment 66	Experiment 67	Experiment 68	Experiment 69	Experiment 70	Experiment 71	Experiment 72	Experiment 73	Experiment 74	Experiment 75	Experiment 76	Experiment 77	Experiment 78	Experiment 79	Experiment 80	Experiment 81	Experiment 82	Experiment 83	Experiment 84	Experiment 85	Experiment 86	Experiment 87	Experiment 88	Experiment 89	Experiment 90	Experiment 91	Experiment 92	Experiment 93	Experiment 94	Experiment 95	Experiment 96	Experiment 97	Experiment 98	Experiment 99	Experiment 100
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